

REMARKS/ARGUMENTS

In paragraph 2 of the detailed action, the Examiner rejects claims 1, 2, 9, 15, 54, 55, 71, 79 and 80 under 35 U.S.C. 102(e) as being anticipated by Vandenameele-Lepla (US App. 2003/0058787).

To begin, it is noted that Vandenameele-Lepla teaches nothing more than the prior art approach referred to in Applicant's own description on page 2, lines 9 through 14. Specifically the Background of the Invention section reads:

“With this approach, a guard interval is left between each pair of consecutive OFDM symbols, and a prefix for each OFDM symbol is formed by copying a part of the data (the so called Identical Cyclic Prefix), typically from the end of the OFDM symbol.”

This is the same as paragraph 14 of Vandenameele-Lepla which indicates that a guard period is inserted and that the guard period is “a cyclic extension of the symbol”. The paragraph further indicates that “by replicating the end of the symbol wave form as the start of the symbol as the guard, the orthogonality of the OFDM wave form is maintained, even in multi-path channel environments”.

Thus, the guard period is not used to transmit a “non-OFDM segment”, but rather is used to transmit a cyclic extension of the OFDM symbol, and therefore can only be considered to be an OFDM segment. Applicant's entire description and claims clearly rule out the non-OFDM segment being a cyclic extension of the OFDM symbol.

The Examiner goes on to refer to the training symbols that are embedded into the data for channel estimation purposes and refers to paragraph 14. The reference to these training symbols is not understood as they are clearly part of the input to the IFFT process that produces the OFDM symbols. As indicated by the Examiner, the training symbols are “embedded” in the data stream at the transmitter end. See for example paragraph 15, lines 5 to 7. The embedding of training symbols into the data stream occurs prior to the IFFT function (see Figure 1 where there

is a reference to the input data stream) and as such they are subject to the IFFT operation and the training symbols are modulated together with the rest of the data symbols to the OFDM wave form. Thus, the fact that training symbols are embedded into the data stream does not constitute the further transmission of a respective non-OFDM segment before and/or after the OFDM symbol.

Thus, the Examiner's reference does not teach any system, method, transmitter, or receiver that involves transmission of OFDM symbols and before/and/or/after each OFDM symbol a respective non-OFDM segment containing known or highly reliable data.

Thus, it is very clear that many of the limitations of the claims are simply not taught in the cited reference.

Specifically, the following claim limitations are not taught in the cited reference:

- 1) transmitting...before/and/or/after the OFDM symbol a respective non-OFDM segment;
- 2) the transmission of such a segment containing known and/or unknown highly reliable data;
- 3) having failed to find any non-OFDM segment, the limitation concerning the non-OFDM segment allowing a conversion at a receiver between linear convolution and a cyclic convolution for the OFDM symbol obviously is also not satisfied by the reference. In the reference, the cyclic extension allows the conversion between the linear convolution and the cyclic convolution, and the cyclic extension as indicated above is not a "non-OFDM segment".

Claims 54 and 79 both contain similar limitations and as such the arguments presented above pertain to these claims as well. The remaining claims rejected under 35 U.S.C. 102(e) all depend upon one of claims 1, 54 and 79 and as such the arguments presented above respecting claim 1 also apply to those claims.

On this basis the Examiner is respectfully requested to withdraw the 35 U.S.C. 102(e)

rejection of the claims.

In paragraphs 2 through 8 of the Office Action the Examiner goes on to raise a series of claim rejections under 35 U.S.C. 103(a). All of these rejections rely upon the Examiner's interpretation of Vandenameele-Lepla, in combination with one or more other references. Applicant has clearly established that the Examiner's application of Vandenameele-Lepla is incorrect, and on this basis, the combination of Vandenameele-Lepla with various references also fails to result in a proper claim rejection under 35 U.S.C. 103(a). In view of this, the Examiner is respectfully requested to reconsider and withdraw the rejections of the claims under 35 U.S.C. 103(a).

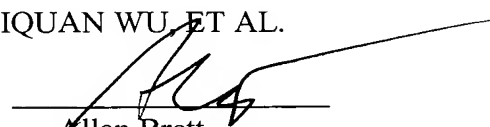
Note that in responding to the Office Action in this manner without commenting on the additional references that have been combined with Vandenameele-Lepla, Applicant is not conceding to the Examiner's interpretation of these other references. Rather, Applicant reserves the right to comment further on those references should they be combined with another potentially more relevant reference than Vandenameele-Lepla.

In view of the foregoing, early favorable consideration of this application is earnestly solicited.

Respectfully submitted,

SHIQUAN WU, ET AL.

By


Allan Brett

Reg. No. 40,476

Tel.: (613) 232-2486 ext. 1323

Date: June 14, 2010

RAB:rld